

Write an equation in slope-intercept form of the line with the given characteristics.

passes through (3, 2)
and (-5, -8)

$$y = \frac{5}{4}x - \frac{7}{4}$$

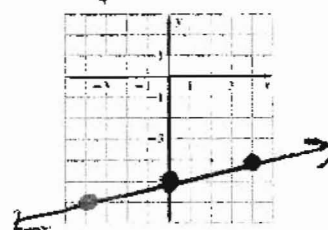
$$m = \frac{-8-2}{-5-3} = \frac{-10}{-8} = \frac{5}{4}$$

$$2 = \frac{5}{4} \cdot \frac{3}{1} + b \quad \frac{8}{4} - \frac{15}{4} = -\frac{7}{4}$$

$$\frac{8}{4} = \frac{15}{4} + b$$

Graph the equation.

$$y = \frac{1}{4}x - 5$$



Find the slope of the line that passes through the points.

(-2, -9) and (-5, 6)

$$m = \frac{6+9}{-5+2} = \frac{15}{-3}$$

$$-5$$

Write an equation in slope-intercept form of the line with the given characteristics.

perpendicular to $y = -3x + 1$;
passes through (2, 2)

$$m = \frac{1}{3}$$

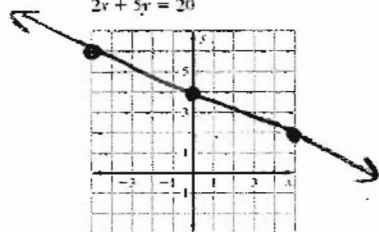
$$2 = \frac{2}{3} + b$$

$$\frac{6}{3} - \frac{2}{3} = \frac{4}{3} = b$$

$$y = \frac{1}{3}x + \frac{4}{3}$$

Graph the equation.

$$2x + 5y = 20$$



$$2x + 5y = 20$$

$$5y = -2x + 20$$

$$y = -\frac{2}{5}x + 4$$

Write an equation in standard form of the line shown.



$$m = \frac{3}{2}$$

$$2 = \frac{3}{2} \cdot \frac{3}{1} + b$$

$$2 = \frac{9}{2} + b$$

$$\frac{4}{2} - \frac{9}{2} = b \quad b = -\frac{5}{2}$$

$$(y = \frac{3}{2}x - \frac{5}{2}) 2$$

$$2y = 3x - 5$$

$$-3x + 2y = -5$$

Find the slope of the line that passes through the points.

$$(-4, -2), (2, 6)$$

$$\frac{6+2}{2+4} = \frac{8}{6}$$

$$\left(\frac{4}{3}\right)$$

Write the equation of the vertical line that passes through the point $(4, -2)$.

$$X = 4$$

Write the equation in standard form using the given information.

$$m = \frac{5}{6}, b = 2$$

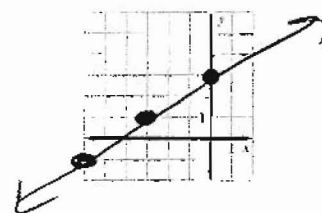
$$(y = \frac{5}{6}x + 2) \cdot 6$$

$$6y = 5x + 12$$

$$-5x + 6y = 12$$

Graph the equation.

$$-2x + 3y = 9$$



$$3y = 2x + 9$$

$$y = \frac{2}{3}x + 3$$

Find the x-intercept and the y-intercept

$$3x - 2y = 8$$

X-int

$$3x = 8$$

$$x = \frac{8}{3}$$

$$\left(\frac{8}{3}, 0\right)$$

Y-int

$$-2y = 8$$

$$y = -4$$

$$(0, -4)$$

Write an equation in standard form of the line that passes through the point $(2, 3)$ and is perpendicular to the line $y = \frac{1}{2}x - 1$.

$$m = -2$$

$$y = -2x + 7$$

$$3 = -4 + b$$

$$b = 7$$

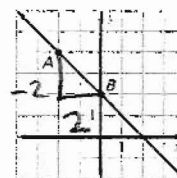
$$2x + y = 7$$

Find the slope of the line that passes through the points.



$$m = -\frac{2}{5}$$

Write an equation of line AB in slope-intercept form.



$$m = -1$$

$$b = 2$$

$$y = -x + 2$$

Find the x-intercept and y-intercept of $y = -3x + 15$.X-int

$$0 = -3x + 15$$

$$3x = 15$$

$$x = 5$$

$$(5, 0)$$

Y-int

$$y = 15$$

$$(0, 15)$$

Write the equation of the horizontal line that passes through the point $(-2, 8)$.

$$y = 8$$